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FACTS ABOUT
OFFSHORE OIL AND GAS DEVELOPMENT
on
GEORGES BANK

October 1976



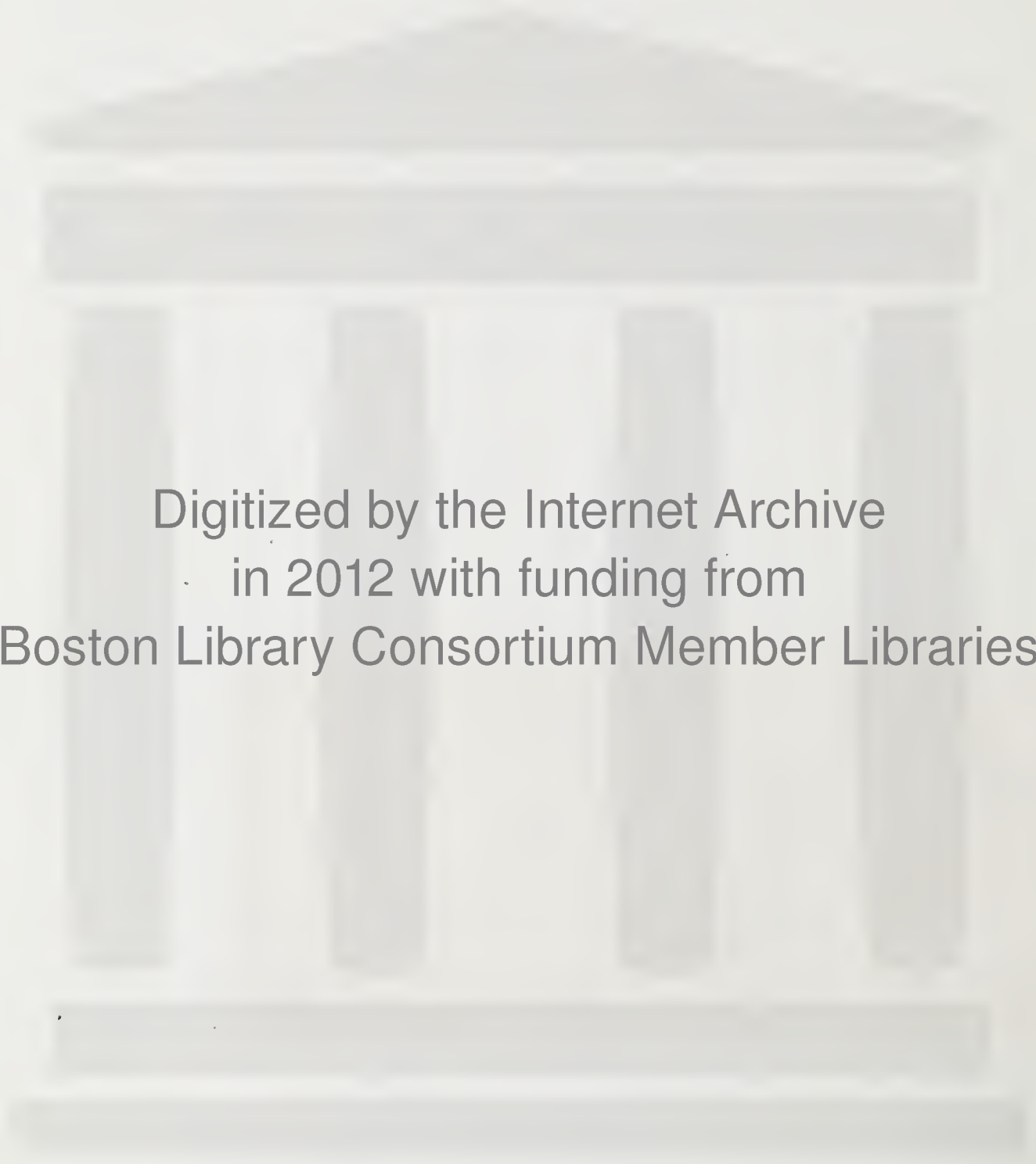
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COASTAL ZONE
MANAGEMENT

The Commonwealth of Massachusetts
Executive Office of Environmental Affairs
100 Cambridge Street
Boston, Massachusetts 02202

GEORGES BANK FACT SHEET

Leasing Process

Call for Nominations	June, 1975
Tentative Tract Selection	January, 1976
Draft E.I.S.	October 12, 1976
Public Hearings	December 7, 8, 9, 10, 1976
Final E.I.S.	January 15, 1977
LEASE SALE	May, 1977

Call for Nominations - 6.4 million hectares = 15.8 million acres
Tract Selection (206 tracts) - 475,000 hectares = 1,200,000 acres
Massachusetts Recommendations on Specific Tracts:

Trajectory Studies	17 tracts
Withdrawal for fishing, oil spills, spawning	7 tracts
Withdrawal for lobsters	2 tracts
Directional Drilling (not withdrawal)	13 tracts
Disputed by Canada	26 tracts

Although 206 tracts have been selected, the Department of Interior may withdraw any of them up until the day of the sale. Based on experience of past sales, only 30-50% of the tracts originally selected are actually leased, for the following reasons:

- a) tracts may be withdrawn for environmental, geological, navigational, or defense reasons;
- b) tracts might not receive any bids;
- c) bids may be rejected by D.O.I. if they are not high enough.

For example, in the mid-Atlantic, 154 tracts were originally selected, all were put up for lease, 401 bids were received on 101 tracts, but high bids accepted only on 93 tracts.

The total for the 93 high bids was \$ 1.1 billion. The D.O.I. expected a maximum of \$ 600 million. The reason for the unexpectedly high bids was: (1) good potential for hydrocarbons; (2) moderate sea and weather conditions; and (3) proximity to major refining and market centers.

Development on Georges Bank

The onshore impacts depend to a large degree on four factors:

- 1) the type of find (gas, oil or both),
- 2) location of find,
- 3) total volume of recoverable hydrocarbons,
- 4) rate of production.

While estimates have been made for the potential recoverable reserves on Georges Bank, exploratory drilling is the only way to determine any of the above factors. There is general agreement among industry and government people that there is a 60% chance of finding no commercially recoverable hydrocarbons. However, the U.S. Geological Survey has estimated the reserves for the first North Atlantic sale at:

0.18 - 0.65 billion barrels of oil (enough to satisfy U.S. demands for less than a month and Massachusetts demands for about 2-3 years)

1.2 - 4.3 trillion cubic feet of natural gas (enough to supply 2 months of U.S. demand and 24 years of Massachusetts demand)

The U.S. Geological Survey has estimated the recoverable resources of the whole of Georges Bank at:

0.90 - 2.4 billion barrels of oil

4.2 - 12.5 trillion cubic feet of gas

The high end of the range represents a 5% probability. The 60% no find figure still holds. Additional lease sales may be held to try and exploit the whole of Georges Bank's potential. The Department of Interior would still have to go through the whole leasing process again (Call for Nominations, E.I.S., etc.). Any of the tracts on Georges Bank not sold the first time around could be considered. The second lease sale, # 52, is currently scheduled for 19 months after the first lease sale, or approximately December, 1978. Although only two lease sales are currently scheduled for Georges Bank, additional lease sales could be held.

High Estimates for U.S. Offshore Areas (5% probability)¹

	<u>OIL (billion barrels)</u>	<u>GAS (trillion cubic feet)</u>
GEORGES BANK	2.4	12.5
TOTAL ATLANTIC COAST	6	22
GULF OF MEXICO	10	125
PACIFIC COAST	6	6.5
ALASKA	31	80
NORTH SEA ²	32	51

Following the lease sale, activities occur in three phases, each of which overlaps and blends into the next.

<u>PHASE</u>	<u>BEGINNING (years after lease sale)</u>	<u>DURATION</u>
EXPLORATION (exploratory drilling)	6 months - 2 years	8 - 10 years
DEVELOPMENT (platforms installed, wells drilled, pipe- line construction)	3 - 6 years	5 - 10 years
PRODUCTION (resources transported for refining and distribution)	8 - 10 years	15 - 20 years

1.- U.S.G.S., Circular 725, "Geological Estimates of Undiscovered Recoverable Oil and Gas Resources in the U.S."

2.- Ocean Industry, June 1976, page 132.

NO FIND SCENARIO ***

FACILITIES	TOTAL NUMBER	TOTAL LAND USE	AVERAGE EMPLOYMENT		TOTAL WAGES (millions)		CAPITAL INVESTMENT
			Local	Total	Local	Total	
Temporary service bases	4-5	75 acres	70	133	1.2	2.3	\$ 1 million
MEDIUM FIND SCENARIO (900 million barrels oil, 4.2 trillion cubic feet).***							
Permanent service bases	6-12	300 acres					\$ 15 million
Platform installation service bases	1	20 acres					\$ 1 million
Pipelines and landfall	2 gas	2 acres					\$ 1,300 million
Pipeline construction service base	1	30 acres					\$ 1 million
Pipecoating yard	1	100 acres					\$ 10 million
Gas processing plant	2	120 acres					\$ 90 million
APPROXIMATE TOTAL		580 acres					\$ 1.5 billion

HIGH FIND SCENARIO (2.4 billion barrels of oil, 12.5 trillion cubic feet)**

FACILITIES	NUMBER	TOTAL LAND USE	AVERAGE EMPLOYMENT		TOTAL WAGES(millions)		CAPITAL INVESTMENT
			Local	Total	Local	Total	
Permanent service bases	10-20	500 acres	582	797	\$ 9.9	\$ 13.5	\$ 24 million
Platform fabrication yard	1	200 acres	1,620	2,025	\$ 30.8	\$ 38.5	\$ 50 million
Platform installation service base	1	30 acres	320*	1,129	\$ 5.7	\$ 20.3	\$ 1 million
Pipelines and landfalls	6	6 acres	148	590	\$ 0.85	\$ 4.0	\$ 2,400 million
Pipeline construction service base	1	40 acres	25	36	\$ 0.4	\$ 0.6	\$ 1 million
Pipecoating yard	2	200 acres	129	143	\$ 2.3	\$ 2.6	\$ 20 million
Gas processing plant	6	345 acres	<u>50</u> 123	<u>84 **</u> 267	<u>\$ 0.8</u> \$ 2.7	<u>\$ 1.3 **</u> \$ 5.3	\$ 266 million
Marine terminal	1	100 acres	<u>25</u> 113	<u>35 **</u> 565	<u>\$ 0.4</u> \$ 2.3	<u>\$ 0.6 **</u> \$ 11.3	\$ 50 million
Refinery	1	1,000 acres	<u>287</u> 1,600	<u>410 **</u> 2,000	<u>\$ 4.3</u> \$ 28.0	<u>\$ 6.2 **</u> \$ 40.0	\$ 690 million
APPROXIMATE TOTALS		2,400 acres					\$ 3.5 billion

* includes offshore and onshore employment

** operation
construction

*** Source: N.E.R.B.C.(R.A.L.I.) Estimates for New England (Draft). New England River Basins Commission, August, 1976.

TIMING OF FACILITIES HIGH FIND SCENARIO



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